

Listing of Claims

1. (Previously Presented) A device for the adjustment of an operating parameter of an analog electronic circuit which includes circuit resistances, comprising:

a plurality of adjustment resistances that are configured to modulate the value of the circuit resistances and thus to adjust the value of the parameter;

fusible means each connected with one of the adjustment resistances and that are selected and activated to configure the adjustment resistances so as to modulate the value of the circuit resistances; and

a logic circuit that receives a control signal as input applied from outside the analog electronic circuit at a terminal thereof and adapted to select one of the fusible means for activation; and

wherein the logic circuit comprises:

a count circuit connected to a combinational logic circuit, the count circuit functioning responsive to the control signal to increment a count forming an addressing signal that is decoded by the combinational logic circuit to identify one of the fusible means; and

a control circuit for controlling activation and de-activation of the analog electronic circuit and the adjustment device connected between the terminal of the analog electronic circuit and the count circuit, the control circuit including a first stage to control activation and de-activation of the analog electronic circuit and a second stage to generate a clock signal controlling the count circuit.

2. (Canceled).

3. (Canceled).

4. (Previously Presented) The device according to claim 1, wherein each of the first and second stage comprises a plurality of diodes in series connected between the terminal of the analog electronic circuit and a switching element controlled as a function of the voltage applied to the terminal, the diodes jointly defining a threshold voltage for activation of the switching element.

5. (Previously Presented) The device according to claim 1, wherein each of the first and second stage is provided with a hysteresis circuit.

6. (Previously Presented) The device according to claim 1, wherein the count circuit comprises a plurality of count flip flops and a plurality of logical gates at the input to the count circuit so as to accelerate transitions of the control signal.

7. (Previously Presented) A device for the adjustment of an operating parameter of an analog electronic circuit which includes circuit resistances, comprising:

a plurality of adjustment resistances that are configured to modulate the value of the circuit resistances and thus to adjust the value of the parameter;

fusible means each connected with one of the adjustment resistances and that are selected and activated to configure the adjustment resistances so as to modulate the value of the circuit resistances; and

a logic circuit that receives a control signal as input applied from outside the analog electronic circuit at a terminal thereof and adapted to select one of the fusible means for activation;

wherein each adjustment resistance is arranged in series with a corresponding fusible element, with each series arranged adjustment resistance and fusible element being arranged in parallel with one of the circuit resistances to be adjusted.

8. (Previously Presented) The device according to claim 1, wherein each of the fusible means is formed from a MOS transistor with a parasite two-pole transistor.

9. (Previously Presented) A device for the adjustment of an operating parameter of an analog electronic circuit which includes circuit resistances, comprising:

a plurality of adjustment resistances that are configured to modulate the value of the circuit resistances and thus to adjust the value of the parameter;

fusible means each connected with one of the adjustment resistances and that are selected and activated to configure the adjustment resistances so as to modulate the value of the circuit resistances;

a logic circuit that receives a control signal as input applied from outside the analog electronic circuit at a terminal thereof and adapted to select one of the fusible means for activation; and

means for adjusting a breakdown voltage threshold of the fusible means.

10. (Previously Presented) The device according to claim 9, wherein each of the fusible means is formed from a MOS transistor with a parasite two-pole transistor, and wherein the means for adjusting comprise a resistance bridge arranged between the gate and the source of each MOS transistor.

11. (Previously Presented) An analog electronic circuit, comprising:

first resistances that are modulated to adjust the value of an operating parameter of the analog electronic circuit;

second resistances that are configured responsive to a control signal received from outside the analog electronic circuit to modulate the value of the first resistances;

fuse elements each connected with one of the second resistances and operable to selectively connect the second resistances in parallel with corresponding first resistances; and

a logic circuit that selects fuse elements responsive to the received control signal and effectuate the selective connection of the second resistances in parallel with corresponding first resistances so as to adjust the operating parameter value by changing an effective resistance value.

12. (Previously Presented) The analog electronic circuit according to claim 11, wherein the circuit functions as a reference voltage source.

13. (Previously Presented) A process for adjusting an operating parameter of an analog electronic circuit, comprising:

setting a counter to zero;

setting a power supply voltage for the analog electronic circuit above a first threshold value so as to de-activate the analog electronic circuit;

generating a device control clock signal so as to increment the counter to a count level corresponding to a selected one of a plurality of fusible elements, that fusible element being connected to a resistance within the de-activated analog electronic circuit whose value has an effect on the operating parameter;

decoding the count level to select the corresponding fusible element; and

increasing the level of the power supply voltage up to the breakdown voltage of the fusible element and thus alter the value of the resistance and make an adjustment to the operating parameter.

14. (Currently Amended) A circuit, comprising

a first resistor connected between a first and a second node;

a modulation resistance circuit comprising a plurality of second resistors each in series with a corresponding one of a plurality of fusible elements, the modulation resistance circuit connected in parallel with the first resistor between the first and second node; and

a logic circuit operable to select at least one of the fusible elements to be blown thus removing the corresponding second resistor from the parallel connection so as to adjust a resistance between the first and second nodes; and

an activation control circuit that controls when the modulation resistance circuit and logic circuit are active to blow selected fusible elements wherein the activation control circuit activates in response to a power supply voltage increasing to exceed a certain threshold.

15. (Previously Presented) The circuit of claim 14 wherein the logic circuit comprises:

a combinational logic circuit that decodes an addressing signal to make a selection as to which fusible element is to be blown.

16. (Original) The circuit of claim 15 wherein the logic circuit further comprises:

a counter circuit which increments responsive to a control signal and outputs a counter value as the addressing signal.

17. (Canceled).

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18. (Canceled).

19. (Currently Amended) The circuit of claim 14 ~~18~~ wherein the selected fusible element is blown when the power supply voltage further increases to exceed fusible element breakdown voltage.

20. (Currently Amended) An analog circuit having an operating parameter whose value is determined by an effective resistance value present between a first and a second node, comprising:

a variable resistance circuit connected between the first and second node and comprising a plurality of resistors each in series with a corresponding one of a plurality of fusible elements; and

a logic circuit operable to select at least one of the fusible elements to be blown thus removing the corresponding resistor from the variable resistance circuit connection so as to adjust the effective resistance value between the first and second nodes; and

an activation control circuit that controls when the modulation resistance circuit and logic circuit are active to blow selected fusible elements wherein the activation control circuit activates in response to a power supply voltage increasing to exceed a certain threshold.

21. (Original) The analog circuit of claim 20 wherein the analog circuit is a reference voltage source and the operating parameter is a reference voltage.

22. (Original) The analog circuit of claim 20 wherein the logic circuit comprises:
a combinational logic circuit that decodes an addressing signal to select the fusible element to be blown.

23. (Original) The analog circuit of claim 22 wherein the logic circuit further comprises:

a counter circuit which increments responsive to a control signal and outputs a counter value as the addressing signal.

24. (Canceled).

25. (Canceled).

26. (Currently Amended) The analog circuit of claim 20 ~~25~~ wherein the selected fusible element is blown when the power supply voltage further increases to exceed fusible element breakdown voltage.